

Clean Version of All Pending Claims

28. (Twice Amended) A process for the production of vitamin B₁₂ (cobalamin), the process comprising culturing a *Propionibacterium* host cell under conditions in which the vitamin is produced and, if necessary, isolating the vitamin, wherein the *Propionibacterium* host cell contains a polynucleotide comprising a sequence that is:

- (a) SEQ ID NO: 1 or the complement thereof;
- (b) a sequence from SEQ ID NO:1 that corresponds to either the 1.7 kb fragment of SEQ ID NO: 1 delineated by restriction sites Sal1 and AlwN1 or nucleotides 1 to 1800 of SEQ ID NO: 1;
- (c) a sequence that encodes the polypeptide of SEQ ID NO: 2 or SEQ ID NO: 3 or a polypeptide at least 70% homologous thereto, the latter polypeptide having the activity of the polypeptide of SEQ ID NO: 2 or SEQ ID NO: 3;
- (d) a sequence according to feature (c) that is a fragment from SEQ ID NO: 1 corresponding to position 273 to 1184 or a fragment from SEQ ID NO: 1 corresponding to position 1181 to 1438; or
- (e) a sequence that is at least 70% homologous to a sequence as defined under (a), (b) or (d), over a region of at least 100 contiguous nucleotides;

and a sequence that is an endogenous gene of a *Propionibacterium* assisting in the production of vitamin B₁₂ operatively linked to a control sequence which is capable of providing for expression of the gene.

39. A process according to claim 2, wherein the endogenous gene of a *Propionibacterium* is the *cobA* gene.